

Section 2. Planning Process



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 $^{^{\}mathrm{1}}$ Section Cover Photo: Plumeria blossoms. Photo by Megan Brotherton





SECTION 2. PLANNING PROCESS

The planning process lays the foundation for developing an effective plan to reduce hazard risk across the state. It involves consultation and collaboration with a variety of stakeholders to provide input to affect the plan content. This section outlines the process the State of Hawai'i followed to update the SHMP and demonstrates the state's ongoing commitment to ensuring a robust planning process. The following describes how the 2023 SHMP Update was prepared; which agencies and stakeholders were invited to and participated in the planning process; and how each section was reviewed, analyzed, and revised.

Figure 2-1 summarizes key planning meetings and milestones during the 2023 SHMP Update planning process. Additional milestones, participants, and supporting documents are contained in Appendix A (Planning Process Documentation).

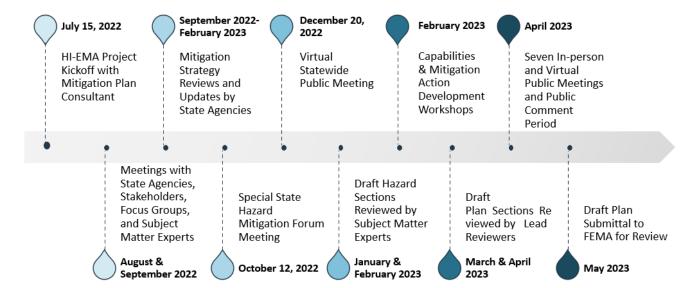


Figure 2-1. Key Planning Meetings and Milestones

2.1 DESCRIPTION OF THE PLANNING PROCESS

Element S1 and 44 CFR § 201.4(b) and 201.4(c)(1): The state plan must include a description of the process used to develop the plan, including how it was prepared, the schedule or timeframe, specific milestones and activities, agencies and stakeholders involved, and if the process was integrated to the maximum extent possible with other state planning efforts.

The HI-EMA Mitigation Section led the 2023 SHMP Update. In mid-2019, the state applied for a FEMA 2019 Pre-Disaster Mitigation (PDM) grant to update the 2018 SHMP. The start date was August 4, 2020. In 2020, HI-EMA appointed a new State Hazard Mitigation Officer (SHMO) to lead the Mitigation Section. In July 2022, the SHMO





was replaced by an acting SHMO who began leading the Mitigation Section. The acting SHMO's vision for the 2023 SHMP Update is to streamline the plan, resulting in a practical and implementable document, coordinate the SHMP with other HI-EMA planning documents, increase collaboration across a broader range of stakeholders to maximize planning efforts, and inspire continued collaboration and implementation beyond the 2023 SHMP Update. In July 2022, the state secured planning consulting services from Tetra Tech, Inc. to facilitate with the 2023 SHMP Update with a schedule to submit the updated plan to FEMA Region 9 during the summer of 2023.

The monitoring, evaluation, and update process outlined in the 2018 SHMP was well-intended; however, it was not fully actualized. HI-EMA recognizes that the Mitigation Section is limited in staffing capacity as discussed further in Section 5 (Capability Assessment) and that the Hawai'i State Hazard Mitigation Forum (Forum) involvement was limited due to the COVID-19 pandemic. Additionally, the frequency of hazard events combined with the state's necessity to redirect attention to disaster response and recovery diverted attention and resources away from the outlined 2018 SHMP maintenance process. Section 7 (Plan Maintenance) further details the challenges and successes of maintaining the 2018 SHMP.

The HI-EMA Mitigation Section met weekly with the chair of the Forum and the planning consultant throughout the 2023 SHMP Update planning process. HI-EMA and the planning consultant met and/or communicated regularly with members of the Forum (individually and as a whole) as well as with key stakeholders and subject matter experts (SME) to identify hazards, assess risks, update capabilities, assist in updating and developing new mitigation goals and strategies, and provide continuity through the process. The roles of the Forum, stakeholders, SMEs, and the public are discussed later in this section. FEMA Region 9 was also consulted throughout the planning process and invited to concurrent SHMP and Forum plan update meetings.

Due to the state's unique geography, convening in-person meetings on a regular basis proves challenging, both in time and resources. Therefore, in addition to the in-person meetings held, there was a great deal of communication between HI-EMA, Forum members, SMEs, and stakeholders through virtual meetings, email, and individual meetings. Early in the planning process, Forum members were provided a roadmap outlining projected meeting dates and major milestones.

More than 75 subject matter experts across all sectors and fields of knowledge related to hazard mitigation were actively engaged and consulted during the planning process. Figure 2-2 illustrates these broad categories of expertise. Appendix A provides additional details including the name, agency, and detailed area of expertise of each subject matter expert involved in the 2023 SHMP Update.

The planning process included numerous meetings with federal and state agencies, academia, and stakeholders to ensure a robust risk assessment, thorough update of capabilities and mitigation progress, and a comprehensive updated mitigation strategy. Many natural hazard SMEs participated, including providing spatial data, guiding the vulnerability assessment methodology, and reviewing the draft Section 4 (Risk Assessment) of this plan. These SMEs were consulted from the beginning stages of the planning process to ensure the best available spatial and natural hazard data and methodologies were utilized to assess the State of Hawaii's risk. They were integral in the review of the draft SHMP Update as well. Appendix A includes a summary the SMEs identified and consulted.





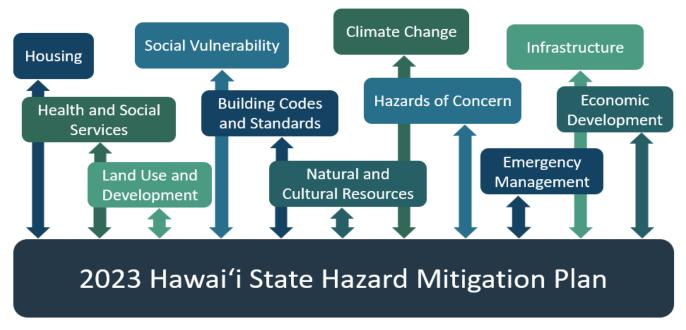


Figure 2-2. SHMP Update Subject Matter Expertise

When the draft 2023 SHMP Update was completed in early 2023, the SHMO identified lead and supporting reviewers per plan section to ensure the first-round of review was conducted by SMEs. The lead reviewers are listed in Appendix A. Draft sections were distributed to the lead reviewers via the project Microsoft Teams file sharing site. All comments received from the SMEs were considered by the HI-EMA Mitigation Section and Forum chair, and incorporated into the draft where appropriate. In addition, the SHMO invited stakeholders listed in Appendix A to review the draft plan released on April 26, 2023, concurrent with public review.

On April 26, 2023, HI-EMA released the draft 2023 SHMP Update allowing the public to provide input on the draft plan prior to submittal to FEMA. The public comment period was open through May 9, 2023. The principal avenues for public comment on the draft plan were the StoryMap and HI-EMA website. In total, 29 comments were received via the form posted on the websites. Additionally, public meetings held in April allowed an opportunity to provide comment on the draft plan, ask questions, and discuss mitigation with the acting SHMO. These meetings were held on all the major islands.

2.2 COORDINATION AMONG AGENCIES

Element S2, HHPD1, and 44 CFR § 201.4(b) and 201.4(c)(1): The state plan must describe how the state coordinated with other agencies and stakeholders, including state and federal agencies. The plan must describe how stakeholders and agencies were involved in the process. At a minimum, stakeholders from the following sectors should be involved: emergency management, economic development, land use and development, housing, health and social services, infrastructure, and natural and cultural resources.

One of HI-EMA's priorities for the 2023 SHMP Update was to ensure increased outreach and collaboration among a wide-range of stakeholders and subject matter experts across sectors to ensure a comprehensive update.





HI-EMA invited and collaborated with partners across federal agencies, state and local government, the private sector, and the public (Figure 2-3). Stakeholders across multiple sectors with mitigation capabilities were specifically identified and invited to participate in the process. In addition, two focus groups were established in September 2022 to assist with defining and enhancing areas of emphasis—one for building codes and standards and one for social vulnerability. The following section describes these stakeholders and the activities that were designed to engage, collaborate, and gather their input in the 2023 SHMP Update.

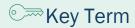
Hazard Subject Matter Experts Climate Change and **FEMA Region 9** Sea Level Rise Cyber Threat Pacific Area **Advisory Bodies** Drought State Hazard State and Local Sector Office Earthquake Mitigation Forum Representatives Flood HETAC **Economic Development** Health Risks **Emergency Management** Hurricane **Focus Groups** Health and Social Services Infrastructure Failure **Building Codes & Standards** Housing Landslide and Rockfall Social Vulnerability Infrastructure Terrorism Land Use and Development Tsunami Natural and Cultural Resources Volcano Private Sector Windstorm Robust Coordination & Collaboration During the Planning Process

Figure 2-3. Stakeholder Coordination

2.2.1 FEMA

The HI-EMA Mitigation Section and the SHMO coordinated with FEMA throughout the planning process. This included consultations, asking questions to ensure the approach to analyzing and organizing natural hazards met FEMA requirements, and providing updates to the Region 9 Pacific Area Office about the planning process.

2.2.2 STATE HAZARD MITIGATION FORUM



State Hazard Mitigation Forum—The Hawai'i State Hazard Mitigation Forum serves in an advisory capacity relative to the incorporation of hazard mitigation policy in Hawai'i.

The former State Civil Defense established the Hawai'i State Hazard Mitigation Forum in 1998. The bylaws (see Appendix B) indicate each county shall be entitled to at least one member with experience and interest in hazard mitigation activities (i.e., risk and hazard analysis, public awareness, education, emergency management, environmental studies or protection, structural engineering, seismology, geology, public works, public utilities, insurance, planning, flood control, land utilization, waste management, sheltering, energy, construction,





communication, building codes, architecture, coastal zone management, or grants management). Forum members may be selected from governmental agencies, the private sector, and the public.

The primary functions of the Forum are as follows:

- Coordinate hazard mitigation activities in the state.
- Recommend and prioritize project nominations for the Hazard Mitigation Grant Program (HMGP).
- Conduct a statewide public awareness campaign.
- Assist in obtaining funds for mitigation projects.
- Develop a hazard mitigation strategy for the state.

In the development of the 2023 SHMP Update, HI-EMA regularly engaged the Forum throughout the planning process. As described in Appendix A, HI-EMA scheduled regular 2023 SHMP Update meetings from October 2022 to March 2023. These meeting dates coincided with regular Forum meetings and included one special session to facilitate participation from members. The Forum provided a variety of expertise to the planning process, including emergency management, natural hazards, land use planning, building codes, transportation, and infrastructure from both state and county perspectives. The Forum was included in all aspects of the planning process and encouraged to provide data and information to support the update and review of interim and draft plan deliverables as outlined further in this section.

Currently, Forum members come from a broad spectrum of state and county agencies and the private sector. The Forum also includes ex officio representatives from all four county emergency management agencies, HI-EMA, and additional state agencies as summarized in Table 2-1. Refer to Appendix B for a list of the individual Forum representatives.

Table 2-1. State Hazard Mitigation Forum Members

Agency	Representative's Sector/Area of Expertise	
Members		
Maui County Emergency Management Agency	County Emergency Management	
State of Hawai'i Office of Planning and Sustainable Development	Land Use and Development	
County of Maui Department of Planning	County Land Use and Development, Building Codes	
Hawai'i State Energy Office	Infrastructure	
Hawaiʻi State Climatologist, University of Hawaiʻi	Natural and Cultural Resources, Climate Change, Natural Hazards	
State of Hawai'i Office of Homeland Security	Emergency Management, Terrorism and Cyber Threat	
Hawai'i State Department of Health, State Toxicologist	Health and Social Services, Hazardous Materials	
City and County of Honolulu, Office of Climate Change, Sustainability	Natural and Cultural Resources, Land Use and Development;	
and Resiliency	Climate Change	
Kauaʻi Emergency Management Agency	Emergency Management	
County of Hawai'i Planning Department, Long Range Planning Division	Land Use and Development	
County of Kaua'i Department of Public Works	Infrastructure	
Honolulu Board of Water Supply	Infrastructure (Water)	
University of Hawaiʻi	Natural and Cultural Resources, Coastal Hazards	
County of Hawai'i Civil Defense Agency	Emergency Management	
State of Hawai'i Department of Transportation, Highways Division	Infrastructure (Transportation)	
County of Hawai'i Planning Department	County Land Use and Development, Building Codes	





Agency	Representative's Sector/Area of Expertise	
Island Strategy LLC, Kaua'i Island Utility Cooperative	Infrastructure (Energy)	
Hawai'i State Department of Business, Economic Development and	Economic Development	
Tourism		
State of Hawai'i Department of Land and Natural Resources, Division	Natural and Cultural Resources	
of Forestry and Wildlife		
State of Hawai'i Office of Planning and Sustainable Development,	Natural and Cultural Resources, Social Vulnerability	
Coastal Zone Management		
Ex Officio Members		
Maui County Emergency Management Agency, Administrator	Emergency Management	
Volunteer (former Hawai'i State Emergency Management Agency	Emergency Management	
State Hazard Mitigation Officer)		
Honolulu Board of Water Supply	Infrastructure (Water)	
County of Hawai'i Planning Department	County, Land Use and Development	
Hawai'i Emergency Management Agency	Emergency Management	
County of Hawai'i Civil Defense Agency	Emergency Management	
State of Hawai'i Department of Land and Natural Resources,	Infrastructure	
Engineering Division		
State of Hawai'i Office of Planning and Sustainable Development,	Land Use and Development	
Coastal Zone Management		
Volunteer	Land Use and Development	
Hawai'i Emergency Management Agency	Emergency Management	
Kaua'i Emergency Management Agency	Emergency Management	
City and County of Honolulu Department of Emergency Management	Emergency Management	
State of Hawai'i Department of Land and Natural Resources,	Infrastructure	
Engineering Division; National Flood Insurance Program Coordinator		
Kaua'i Emergency Management Agency, Administrator	Emergency Management	
Hawai'i Emergency Management Agency	Emergency Management	

Note: The State Hazard Mitigation Forum members listed in this table are current as of March 2023

2.2.3 HAWAI'I EARTHQUAKE AND TSUNAMI ADVISORY COMMITTEE

The Hawai'i Earthquake and Tsunami Advisory Committee (HETAC) was established in 1990 as a peer group of scientists who serve as an advisory body to HI-EMA. The committee meets quarterly to promote research, project development and management, and mitigation activities. HI-EMA consulted HETAC throughout the 2023 SHMP Update process.

2.2.4 STATE AGENCIES AND STAKEHOLDERS

The National Mitigation Framework emphasizes the valuable role of collaboration among sectors to ensure that mitigation capabilities continually develop and that comprehensive mitigation includes strategies for all community systems. In addition to collaborating with the Forum, the HI-EMA Mitigation Section coordinated with additional federal and state agencies and stakeholders throughout the 2023 SHMP Update. The following sectors were engaged throughout the planning process and were provided opportunities to provide plan input: emergency management; economic development; land use and development; housing; health and social services; infrastructure; natural and cultural resources; academia and SMEs; private and public sectors. Representatives





from each of the sectors were invited and engaged in small workshops to allow for specific input on capabilities, explore gaps and challenges, and collaborate to develop proposed solutions (Figure 2-4). New mitigation action items were submitted by state agencies for this update based on discussion outputs from the February workshops. Detailed participant lists and discussion outputs are included in Appendix A.

Figure 2-4. Sector Workshops



A summary of the sectors engaged in the update process and further details on coordination with other agencies and stakeholders (e.g., distribution of capability assessment tables, interactive exercises at Forum meetings, individual meetings to discuss and collect risk assessment data and methodology, etc.) is found in Appendix A.

HI-EMA is committed to increasing coordination and collaboration in future hazard mitigation planning and grant activities. As noted throughout, this is a "living" document, and hazard mitigation planning is an ongoing process. HI-EMA will integrate agencies, departments and stakeholders further, as noted in Appendix A, the updated mitigation strategy action plan (Section 6), and the plan maintenance strategy outlined in Section 7.

2.2.5 FOCUS GROUPS

Proposed solutions

SOCIAL VULNERABILITY

Broad representation from state agencies and non-government organizations (listed in Appendix A) considered existing datasets for the social vulnerability analysis in the 2023 SHMP Update. Social vulnerability indices, datasets, and tools—including the state's ALICE (Asset Limited, Income Constrained, Employed), the Centers for Disease Control Social Vulnerability Index (CDC SVI) and the National Risk Index (NRI)—were discussed to determine which one best reflected vulnerability in the State of Hawai'i. While each dataset has limitations in





reflecting the complex community structure in the islands, the CDC SVI was chosen by the Social Vulnerability Focus Group for this planning effort. It was learned during this plan update that, due to the unique nature of the State of Hawai'i and its population, state agencies are currently engaged in a collaborative effort to develop a state-specific social vulnerability dataset that can be used in the future for coordinated planning purposes.

BUILDING CODES AND STANDARDS

State agencies, county representatives, and non-government organizations met to discuss building codes and standards requirements for the SHMP, how building codes facilitate resilience, and where land use regulations and capabilities contribute to hazard mitigation efforts (see Appendix A for a list of participants). It was acknowledged that a lack of capacity on both the state and county level make it a challenge to adopt and enforce current building codes and provide education to officials and community members on the benefits versus the cost of higher regulatory standards. Lively discussion ensued about the need to increase the state's Building Code Effectiveness Grading Scale (BCEGS) score which would make Hawai'i more competitive on the national level for FEMA BRIC grants. Refer to Section 5 (Capability Assessment) for additional discussion.

2.2.6 COUNTIES

As noted above, the Forum includes representatives from all four county emergency management agencies who were invited to all 2023 SHMP Update meetings and participated in the planning process. The County of Kaua'i, City and County of Honolulu, County of Maui, and County of Hawai'i partnered with HI-EMA to hold public meetings in their jurisdiction to inform the public of the 2023 SHMP Update and solicit input. Appendix A summarizes these meetings and attendance.

2.2.7 PUBLIC

The HI-EMA Mitigation Section and the administrator chose to expand public involvement in the planning process for the 2023 SHMP Update. HI-EMA placed importance on providing multiple opportunities for residents on all the islands to participate in the process. In July 2022, the hazard mitigation website was updated to keep the public informed of the process (Hazard Mitigation Plans). On December 20, 2022, a virtual state-wide public meeting was held to provide a status update and present risk assessment results. A survey was released during the public meeting to gauge awareness of hazards. The meeting was publicly advertised to give residents an opportunity to provide input on the planning process (refer to Figure 2-5).

The HI-EMA Mitigation Section scheduled seven in-person public meetings on the major islands to discuss the 2023 SHMP Update. These meetings were held in the City and County of Honolulu (April 5, 2023), County of Hawai'i (Hilo on April 17, 2023 and Kona on April 18, 2023), County of Maui (Moloka'i on April 19 and Maui on April 20), County of Kaua'i (April 24, 2023), and a statewide meeting in Kapolei (May 3). Locations and times were promoted through HI-EMA press releases (Figure 2-6 and Figure 2-7) and with links to the StoryMap (Figure 2-8). Refer to Figure 2-9 of the meeting locations and Appendix A (Planning Process Documentation) for further details on additional outreach conducted and public comments received on the draft 2023 SHMP Update.





Figure 2-5. Social Media Post Announcing the December 20, 2022 Virtual Public Workshop



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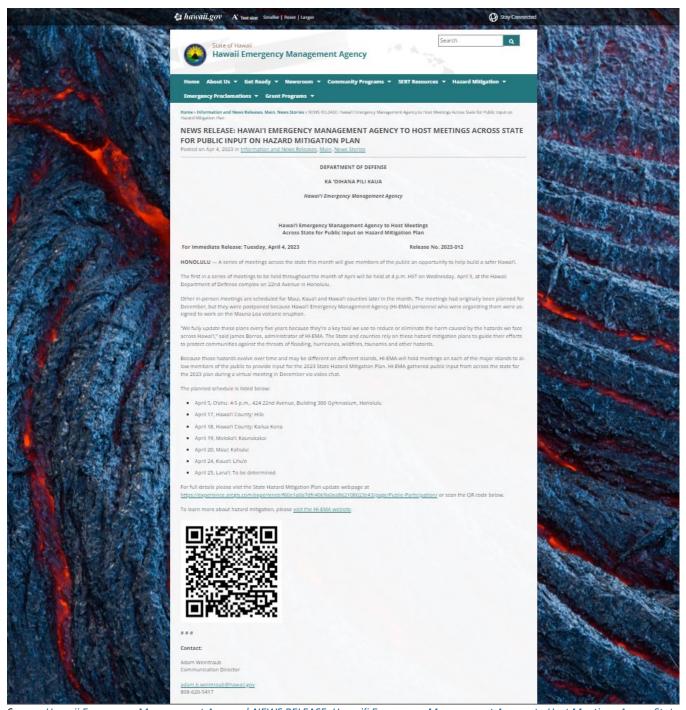
Source: Hawaii EMA (@Hawaii_EMA) / Twitter

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Figure 2-6. April 4, 2023 HI-EMA Press Release for Statewide In-Person Public Meetings



Source: <u>Hawaii Emergency Management Agency | NEWS RELEASE: Hawai'i Emergency Management Agency to Host Meetings Across State</u> for <u>Public Input on Hazard Mitigation Plan</u>





Figure 2-7. May 2, 2023 Press Release for Final Statewide Hybrid Public Meeting

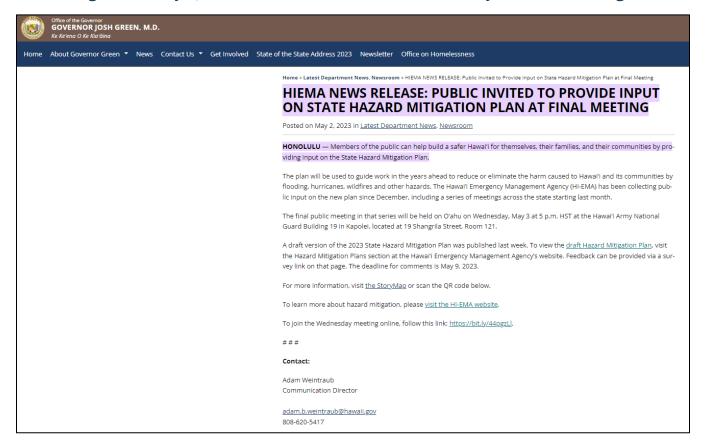
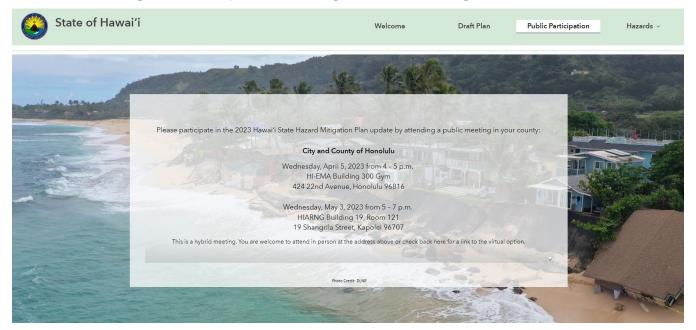


Figure 2-8. StoryMap Promoting the Public Meetings in April 2023



Source: Public Participation | HI State Hazard Mitigation Plan Update (arcgis.com)





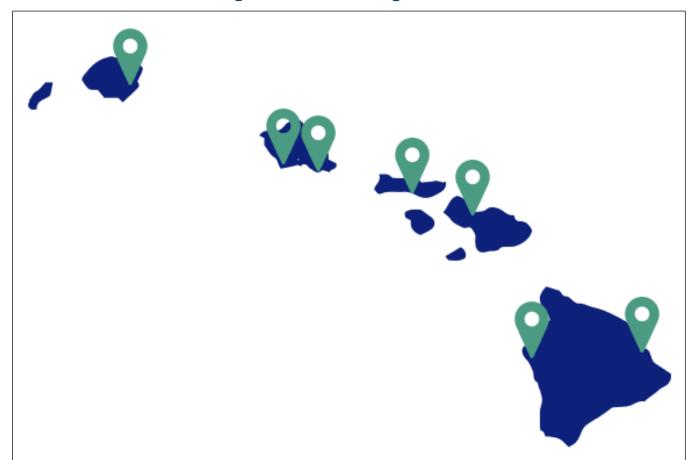


Figure 2-9. Public Meeting Locations

On April 26, 2023, HI-EMA released the draft plan for public review and comment. The public comment period was open through May 9, 2023. A link to the draft plan was posted on the HI-EMA website (Hawaii Emergency Management Agency | Hazard Mitigation Plans) and added to the StoryMap (Draft Plan | HI State Hazard Mitigation Plan Update (arcsis.com). Once approved by FEMA, the plan will be posted on the same HI-EMA website. The public was encouraged to submit comments through an online comment form. All comments received through May 9, 2023, were reviewed and taken into consideration by the HI-EMA Mitigation Section. Applicable and appropriate comments are summarized in Appendix A.

2.3 PROGRAM INTEGRATION

Element S1 and 44 CFR § 201.4(b) and 201.4(c)(1): The state plan must include a description of the process used to develop the plan, including how it was prepared, the schedule or timeframe, specific milestones and activities, agencies and stakeholders involved, and if the process was integrated to the maximum extent possible with other state planning efforts.

Mitigation plan implementation is most effective when mitigation planning efforts are integrated and coordinated with other state and federal programs and initiatives. A vision of the 2023 SHMP Update was to enhance





coordination among sectors and integrate the SHMP with other planning efforts. The integration of mitigation into other programs and progress on 2018 SHMP mitigation actions that addressed integration into other planning mechanisms and/or encourage collaborative planning are discussed further in Section 5 (Capability Assessment), Section 6 (Mitigation Strategy), and Appendix C (Capability Assessment Supplement).

2.3.1 STATE MITIGATION PROGRAMS AND INITIATIVES

Within the State of Hawai'i, there are several state programs and initiatives that foster SHMP integration and coordination. These programs and initiatives are summarized below, with further details discussed in Section 5 (Capability Assessment) and Appendix C (Capability Assessment Supplement). HI-EMA used this update of the SHMP as an opportunity to further promote integration. In addition, numerous plans were reviewed and integrated into the 2023 SHMP Update, as documented in the References section. The following list highlights integration opportunities during the planning process as well as a sampling of plans that were integrated into the risk assessment:

- Broad SME and County Collaboration on the Risk Assessment—SMEs from state and federal agencies and academia were consulted during the data collection phase and risk assessment methodology development for the 2023 SHMP Update through one-on-one meetings as well as phone and email outreach. Further, these and additional SMEs were requested to conduct a technical review of Section 4. Each county has representation on the Forum with opportunity to collaborate and participate throughout the planning process, including at the risk assessment meeting when draft results were reviewed and discussed. Appendix A lists the SMEs that were specifically identified to conduct technical reviews of the draft plan prior to release for public comment. Additional input from SMEs is summarized in Section 4 (Risk Assessment). This collaboration produced an assessment that incorporated best available data and allowed for revisions throughout the process to achieve the greatest accuracy when representing risk.
- **Economic Expansion of Forum Representation**—Starting in 2022, the Department of Business, Economic Development & Tourism was represented on the Forum and participated in the planning process by attending Forum meetings and contributing to the mitigation strategy. As a result of greater representation, the economic sector was more involved in this update process by contributing to revisions in the hazard risk ranking and including coordinated mitigation strategies in the SHMP.
- Local HMPs—Local HMPs were reviewed, and data and information were integrated as possible, including hazards of concern and potential new development. Goals and objectives identified in local HMPs were used to inform the development of goals and objectives for the 2023 SHMP Update. County leaders worked with the state in goal and objective development and all aspects of plan development through their involvement on the Forum. The outcome of these reviews emphasized the need for ongoing coordination between the SHMP and local HMPs to produce strong mitigation plans with a unified approach to assessing risk throughout the state.
- HI-EMA Strategic Plan—Mitigation as one of the four phases of emergency management (preparedness, response, recovery, and mitigation) is a key element of the HI-EMA Strategic Plan, and the SHMP will continue to support and be integrated into Strategic Plan updates.
- Forum Meetings Discussing FEMA HMGP Projects—The Forum met during the 2018 SHMP performance period to identify and rank FEMA DR HMGP projects for DR-4282, DR-4365, DR-4366, DR-4395, DR-4549,





- DR-4604, DR-5404, and DR-4510. As a result of this coordination, numerous projects have been funded by HMGP grants. Seven HMGP grant-funded projects closed during the past five years. Twenty-two are currently open and 17 more are under FEMA review.
- Hazards and Vulnerabilities Overview 2022 (HVO)—The HVO was used to align hazard categories across
 HI-EMA planning efforts, resulting in coordination among planning efforts. The 2023 SHMP Update hazard
 list reflects this alignment.
- 2015 Hawai'i Catastrophic Hurricane Plan—To align with the 2015 Hawai'i Catastrophic Hurricane Plan, the statewide and four county-specific hurricane scenario events were evaluated for the 2023 SHMP Update. This produced a robust, inclusive risk assessment for the hurricane hazard.
- Threat and Hazard Identification and Risk Assessment (THIRA) and Stakeholder Preparedness Review (SPR)—The results of the THIRA capability assessment were reviewed for the adaptive capacity component to the hazard ranking methodology, as outlined in Section 4.17 (Vulnerability Summary) resulting in ongoing coordination among HI-EMA planning efforts.
- Hawai'i 2050 Sustainability Plan—The Sustainability Plan, notably the social vulnerability strategies, were
 reviewed for the capability assessment and mitigation action development. This coordination further
 identified the ongoing need to develop a state-specific method for identifying socially vulnerable
 populations.
- Annual Consultation—The FEMA Region 9 annual consultation summary was reviewed and used to identify challenges and opportunities as documented in Section 5 (Capability Assessment). The annual consultation allowed HI-EMA to develop targeted strategies to strengthen the state mitigation program.
- Hawai'i Highways Climate Adaptation Action Plan 2021—The Hawai'i Department of Transportation is a member of the Forum and provided the Hawai'i Highways Climate Adaptation Action Plan for review. It was used to identify mitigation actions for the 2023 SHMP Update. Information from this plan was also used to facilitate discussions and answer questions about HDOT's awareness of at-risk state roads during the in-person public meetings in Hawai'i County and Maui County.
- The County of Hawai'i Volcanic Risk Assessment 2020 and the Kīlauea Recovery and Resilience Plan— These two documents were reviewed for the volcanic hazards profile, mitigation action development, and capability assessment. During the SHMP planning process, the 2022 eruption of Mauna Loa emphasized the need to coordinate these two documents with other county and state planning efforts.
- Makani Pahili 2017 Emergency Power Prioritization Workshop Series Report—In 2017, HI-EMA led a collaborative planning effort with county, state, federal, private sector, and non-governmental organizations to address temporary emergency power planning requirements outlined in the 2015 Hawai'i Catastrophic Hurricane Plan. The results of this effort were memorialized in the Makani Pahili 2017 Emergency Power Prioritization Workshop Series Report and included the identification of community lifelines and critical facilities within the state. This robust critical facility inventory was utilized for the 2023 SHMP Update risk assessment to provide a foundation for other state and county planning efforts.
- Pacific Risk Management Ohana (PRIMO)—The State Hazard Mitigation Forum, the HI-EMA Administrator, and acting SHMO participated in PRIMO meetings in 2023, resulting in additional collaboration with emergency managers throughout the state.





- Hawai'i Sea Level Rise Vulnerability and Adaptation Report (2022)—The 2022 Hawai'i Sea Level Rise Vulnerability and Adaptation Report was an update to the 2017 report. This report quantified the potential area and assets exposed to projected sea level rise, mapped vulnerability zones, and formulated a comprehensive adaptation strategy. Adaptation strategies were integrated into the 2023 SHMP Update mitigation strategy to facilitate additional opportunities to mitigate the sea level rise hazard.
- Hawai'i Drought Plan 2017 Update—Information from this plan was used to support the drought risk
 assessment and prompted additional discussions with drought SMEs on recent and ongoing studies
 conducted in the state to better understand the potential impacts from the drought hazard.
- Natural Disaster Economic Recovery Strategy (NDERS)—The NDERS was reviewed for integration in the 2023 SHMP Update within the mitigation action plan. Discussions about the NDERS during the workshop with sector representatives allowed for better understanding of how economic impacts may be lessened by implementing creative mitigation strategies.
- U.S. Coral Reef Task Force (USCRTF)—Mitigation Section staff, including the SHMO, attended the 45th
 USCRTF meeting in Kailua-Kona and participated in working group meetings, site visits, and special
 sessions to support the development of coral reef restoration mitigation actions. This increased
 awareness of the ability of healthy coral reefs to reduce hazard impacts on state structures and
 infrastructure located in coastal areas.
- Communities at Risk from Wildfire (CAR)—The CAR data was provided by the Hawai'i Wildfire Management Organization (HWMO) for use in the vulnerability assessment. The available Community Wildfire Protection Plans (CWPPs) were reviewed and integrated into the wildfire risk assessment. This supported coordination among the plans to represent the increasing risk from wildfires in the islands.
- Climate Change Impacts in Hawai'i, 2014—Local impacts of climate change on the State of Hawai'i were
 integrated into the risk assessment update.
- State of Hawai'i Databook—The State of Hawai'i Databook was utilized to report current and projected population and development statistics in Section 3 (State Profile) and support the hazard-specific analyses on projected changes in development in the risk assessment.
- Hawai'i Earthquake and Tsunami Advisory Committee—Several members of HETAC are SMEs and draft plan reviewers for the 2023 SHMP Update: earthquake, landslide, tsunami, volcanic hazards. The HI-EMA Mitigation Section attended quarterly HETAC meetings, updated members on mitigation, and provided status updates on the 2023 SHMP Update during the planning process. Coordination allowed for HETAC scientists to be fully engaged in the analysis and provide recommended revisions to the draft plan.
- State Building Code Council (SBCC)—The HI-EMA Mitigation Section attended and participated in State Building Code Council meetings. As a result, closer coordination between HI-EMA the SBCC is anticipated to help narrow the gap between Building Code Effectiveness Grading Scale (BCEGS) scores and potential mitigation funding opportunities.
- Legislative Briefings—The HI-EMA Mitigation Section attended numerous legislative briefings on pending legislation during the performance period of the 2018 SHMP. During the 2023 SHMP Update planning process, the Hawai'i State Legislature passed a resolution (SR35) designating coral reefs as critical natural infrastructure and supporting nature-based solutions such as coral reef restoration for risk reduction.
- Hawai'i Statewide GIS Program, Office of Planning and Sustainable Development (OPSD)—Much of the spatial data used for the 2023 SHMP Update was facilitated through the OPSD geospatial data portal. The





need for ongoing coordination and collaboration among planning efforts in the state was acknowledged when reviewing data outputs.

- Meetings with the State National Flood Insurance Program (NFIP) Coordinator—HI-EMA and Planning Consultant met with the state NFIP Coordinator to discuss recent flood events, insurance policy counts, the update of the 2018 SHMP mitigation strategy, and the capability assessment and to identify mitigation actions for the 2023 SHMP Update. These meetings enabled an accurate representation of the flood and dam failure hazards to be presented in the SHMP.
- National Emergency Managers Association (NEMA) Forums (2022 and 2023)—The SHMO attended the week-long NEMA Forums to enhance the 2023 SHMP Update. Outcomes included networking with decision-makers who influence mitigation policy and funding in the state.
- Hazard Mitigation Partners Workshops (2021 and 2022)—The SHMO attended the virtual workshops presented by FEMA to gather information about mitigation grants and other applicable updates to benefit the SHMP planning process and help the state to be more effective in the grant application process.
- State Agency Meetings—The HI-EMA Mitigation Section attended meetings with state agency representatives and legislators on various issues to advance progress on mitigation efforts in the state.

